

Module 6: Safety at the HIV Rapid Testing Site

Purpose	To provide the participants with necessary attitudes, knowledge, and skills about lab safety so they will take precautions to prevent infections at the HIV rapid testing site.
Pre-requisite Modules	Module 5: Assuring the Quality of HIV Rapid Testing
Module Time	45 minutes
Learning Objectives	<p>At the end of this module, participants will be able to:</p> <ul style="list-style-type: none">• Adhere to personal health and safety practices• Maintain a clean and organized workspace• Disinfect and dispose of infectious materials• Take appropriate actions following accidental exposure to potentially infectious specimen• Follow written safety procedures and keep proper safety records


Module Overview


Step	Time	Activity/ Method	Content	Resources Needed
1	10 min	Presentation	Module introduction	Slides 1-6; prepared flipchart – content outline
2	20 min	Presentation; Discussion	Safety practices	Slides 7-26; eye wash units; Bio-hazard poster; sharp containers; Materials required for demonstrating how to handle a spill
3	5 min	Q&A	Summary	Slide 27
4	10 min	Discussion	Safety practices and you	Flipchart

Material/Equipment Checklists


- PowerPoint slides or transparencies
- Overhead projector or computer w/LCD projector
- Prepared flipchart – content outline, discussion questions
- Eye wash units
- Bio-Hazard poster or sticker
- Sharp containers
- Materials required for demonstrating how to handle a spill
- Handouts:
 - Guidelines for Post Exposure Prophylaxis (PEP)
 - Example: Emergency Contact List
 - Log of Work Related Injuries and Illnesses

Teaching Guide

Slide Number	Teaching Points
1	<p><u>Module 6: Safety at the HIV Rapid Testing Site</u></p> <p>DISPLAY this slide before you begin the module. Make sure participants are aware of the transition into a new module.</p>
2	<p><u>The Lab Quality System</u></p> <p>REMIND participants that site safety is one component of the lab quality system.</p>
3	<p><u>Why Is Safety Important?</u></p> <p>DISCUSS why performing HIV tests poses a potential health hazard to the tester. ENCOURAGE participants to share their thoughts.</p> <p>ASK, “What is it about performing rapid testing on a client that could put the tester at risk?” (Answer – The tester may come into contact with blood from the client, and all specimens should be treated as though potentially hazardous).</p> <p>ASK, “What might be present in the client’s blood that would be dangerous to others?” (Answer – Agents that can cause infection. Such agents may also be called pathogens, and since these pathogens live in blood, they are called blood-borne pathogens.</p> <p>ASK participants to give some examples (e.g. HIV, Hepatitis).</p>
	<p>TELL true stories or relay your personal experiences about what happened when someone did not take safety precautions.</p>
 TIPS	<p>Stories or scenarios that evoke emotions (fear, shock, sympathy, sorrow, etc.) are excellent ways in getting participants to pay attention and adopting the right attitudes about lab safety. This is especially important when teaching participants without medical or lab experience.</p>

Slide Number	Teaching Points
4	<p><u>What Else Needs Protection?</u></p> <p>EXPLAIN that besides tester and client, we also need to:</p> <ul style="list-style-type: none"> • Protect other people from infection <ul style="list-style-type: none"> ○ Never leave blood spills that could infect others. ○ Never leave used lancets lying around for anyone else to pick up – they could prick themselves with HIV contaminated lancets. ○ Always seal contaminated waste – you don't want to risk infecting the person who removes contaminated waste from the rapid testing site. • Protect integrity of test products <ul style="list-style-type: none"> ○ It is important not to contaminate unused tests. ○ If a new unused test is contaminated by a drop of blood from a previous client, the test may not yield accurate result when used on the next client. • Protect the environment from hazardous material <ul style="list-style-type: none"> ○ Care should be taken to avoid transferring contaminated materials into areas outside of the testing area.
5	<p><u>Learning Objectives</u></p> <p>STATE the objectives on the slide.</p>
6	<p><u>Content Overview</u></p> <p>EXPLAIN the topics that will be covered in this module.</p>
<p>Flipchart</p> 	<p>REFER to the previously prepared flipchart to orient participants to where they are in the module.</p>

Slide Number	Teaching Points
7	<p><u>Universal or Standard Precautions</u></p> <p>DISCUSS the implications of the text on the slide. ENCOURAGE participants to share their thoughts.</p> <p>ASK, “Why should every blood sample be treated as though it is infectious?” (Answer: Harmful agents/organisms may be present in a client’s blood. If a person comes into direct contact with the blood, that person could be infected.)</p> <p>CONCLUDE that as a result, we must follow safety practices in every step of the testing process.</p>
8	<p><u>Apply Safety Practices Throughout the Testing Process</u></p> <p>HIGHLIGHT the safety practices within each phase of testing.</p> <ul style="list-style-type: none"> • Before testing - specimens shall be transported in a manner to prevent contamination of workers, patients, environment <ul style="list-style-type: none"> ○ Use appropriate packing containers ○ Follow national and international postal and transport regulations • During testing – Apply safety rules when performing finger-prick and actual testing of the client’s blood. • After testing <ul style="list-style-type: none"> ○ Clean up working area ○ Properly dispose of contaminated waste


Slide Number	Teaching Points
9	<p><u>Develop Personal Safe Work Habits</u></p> <p>DISCUSS each personal safe work habit. ENCOURAGE participants to share their thoughts.</p> <p>ASK, “Why do testers need to wash their hands between testing each client?” (Answer: To wash away any germs that might be present on the tester’s hands – this will ensure that no infections are passed from the tester or previous client onto the next new client.)</p> <p>ASK, “Why do we need to wear fresh gloves for each new client?” (Answer: To protect the client and tester from cross-infection – the transfer of infection from one person to another.)</p> <p>ASK, “Why wear lab coat or apron?” (Answer: This is to protect the tester from reagent spills, client’s blood.</p> <p>ASK, “Why do we need to get rid (or not re-use) of used sharp objects such as needles or lancets?” (Answer: Sharp objects can cut human skin. Any germs or pathogens present on the lancet can be passed from the lancet into that person’s blood through the cut.)</p>
10	<p><u>Develop Personal Safe Work Habits (Cont’d)</u></p> <p>CONTINUE the discussion of personal safe work habit. ENCOURAGE participants to share their thoughts.</p> <p>ASK, “Why is pipetting by mouth strictly forbidden?” (Answer: You run the risk of accidentally swallowing or coming into direct contact with harmful materials.)</p> <p>ASK, “Why is eating, drinking, or smoking not allowed in the test site?” (Answer: Harmful germs or pathogens can be an entry point to the from touching contaminated objects followed by contact with your mouth.)</p> <p>ASK, “Why is it important to keep food away from the testing area or a refrigerator that contains blood samples?” (Answer: Infectious agents/pathogens can be carried in food and transmitted to people.)</p>
	<p>STRESS the importance of “Never let your mouth touch anything from work, such as pens, pencils, etc.”</p>
 TIPS	<p>Again, sharing personal stories or experiences will increase participants’ motivation to adopt these personal safety routines.</p>


Slide Number	Teaching Points
11	<p><u>Maintain Clean & Orderly Work Space</u></p> <p>DISCUSS each safe work habit. ENCOURAGE participants to share their thoughts.</p> <p>ASK, “Why keep work areas uncluttered?” (Answer: So there is less chance for accidents.)</p> <p>ASK, what does disinfect mean? (Answer: To kill any harmful germs/pathogens).</p> <p>ASK, “Why disinfect daily?” (Answer: Just because a work area was disinfected yesterday, it does not mean it is still free of germs today.)</p> <p>ASK, “Why limit access to the lab?” (Answer: It is important to prevent other people from risk of infection, as well as to protect the client’s confidentiality. Limiting access also prevents distractions).</p> <p>ASK, “Why keep supplies locked?” (Answer: To prevent unauthorized persons having access to potentially dangerous objects such as lancets)</p>
	<p>EXPLAIN the eye wash unit: its purpose and how to use.</p> <p>STATE that the eye wash unit is used to clean one’s eyes when they are accidentally splashed with any type of specimen; for example from patients, controls, reagents, etc.</p> <p>EXHIBIT an eye wash bottle and pass it around for everyone to see.</p> <p>SHOW how to use the unit.</p> <p><i>Note: If an eye wash unit is not available, please consult your local infection control personnel for alternate procedures to follow in the event of an accidental splash.</i></p>
	<p>EXPLAIN the term “bio-hazard.”</p> <ul style="list-style-type: none"> • “Bio” means life and “Hazard” means danger. “Bio-hazard” means something is dangerous to life. • Examples of bio-hazard materials include: client’s blood, used test kits, anything that comes into contact with client’s blood, etc. • It is a good practice to put a Bio-Hazard sign on any containers holding the waste from your tests. <p>SHOW a “Bio-hazard” poster or sticker from your country.</p>
	<p>SHARE a personal story or experience to illustrate the importance of these practices.</p>

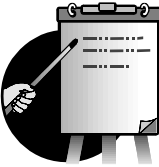
Slide Number	Teaching Points
Transition	<p>SUMMARIZE safe work habits – personal, work space, and material.</p> <p>ASK participants if they have any questions before moving on to the next topic.</p>
12	<p><u>Take Precautions to Avoid Needle Stick Injury</u></p> <p>STATE that needle-stick injury can be dangerous because infected blood containing pathogens can be transferred to the person and cause infection.</p> <p>DISCUSS ways to avoid needle stick injury due to:</p> <ul style="list-style-type: none"> • Lack of concentration – One should focus on where the needle is, one's hand, and client's hand. Don't let yourself be distracted. • Inexperience – Only people who have received appropriate training should perform the finger-stick procedure. • Lack of concern for others <ul style="list-style-type: none"> ○ Always get rid of used needles or lancets according to proper procedures. Place used lancets in the sharps disposal container. ○ Do not leave used needles or lancets lying around. ○ Clean up after each client. <p>STATE that special measures are required for disposing of needles and sharps. Transition to next slide.</p>


Slide Number	Teaching Points
13	<p><u>Drop Used Sharps in Special Containers</u></p> <p>STATE that there are many makes, shapes and sizes of sharp bins. However, all sharp containers should have:</p> <ul style="list-style-type: none"> • A lid • Puncture-proof or thick walls • A large enough hole for lancets and needles • Leakproof sides and bottom • A label or color code indicating bio-hazard material • Sufficient quantity available at each testing site <p>HIGHLIGHT not all sharps containers need be purchased commercially. An empty bleach container will suffice such as seen on the right. This type container meets all previously mentioned specification. Additionally, the opening is small so that you cannot insert your hand.</p>
14	<p><u>Do's and Don'ts: Sharps and Waste Containers</u></p> <p>EXPLAIN the bullet points on the slide:</p> <ul style="list-style-type: none"> • You could injure yourself if you try to bend needles or lancets. • Never shake sharps containers to create space because this leads to formation of aerosols. Aerosols are tiny invisible droplets in the air that can also carry infectious agents/pathogens. <p>EXPLAIN the two different types of containers on the slide:</p> <ul style="list-style-type: none"> • The left one is a plastic bag for contaminated waste. It should not be used for sharp objects as they can pierce the bag and injure someone. • The red plastic container on the right is suitable for sharp objects as the plastic is thick enough so that sharp objects cannot puncture the container. It also has a lid.

Slide Number	Teaching Points
15	<p><u>Do's and Don'ts: Sharps and Waste Containers</u></p> <p>FACILITATE a discussion of the picture on the left. What's wrong about it? ENSURE the following points are brought up.</p> <ul style="list-style-type: none"> • Open container containing a mixture of blood, sharps, and other contaminated waste • No lid • No label to warn people of bio-hazard waste • Placed on the floor and prone to spill <p>NOTE: Consider replacing the left picture with a real example from your country.</p>
	<p>FACILITATE a discussion of the picture on the right. What's right about it? ENSURE the following points are brought up.</p> <ul style="list-style-type: none"> • Container made of thick plastic. This is appropriate for disposing of sharps. • Bottle has a lid and sealed <p>Plastic bag will be securely tied once filled. This is appropriate for disposing of contaminated waste such as used gauze. This type of container is NOT appropriate for disposal of sharps.</p>
16	<p><u>Never Place Needles or Sharps in Office Waste Containers</u></p> <p>DISCUSS why one should never place needles or sharps in office waste containers and what the consequences might be.</p> <p>EMPHASIZE that contaminated waste should be kept separate for office waste. It is the tester's responsibility not to put any other persons at risk of infection.</p> <p>POINT OUT the image of the right illustrates improper disposal of objects. Sharps are mixed with non-sharp items and opening exposed posing a potential hazard.</p> <p>SHARE a story or personal experience of improper handling of sharps and consequences</p>
17	<p><u>Sharps Containers Must Be...</u></p> <p>STATE the points on the slide.</p>
18	<p><u>Policy for Handling Sharps</u></p> <p>SUMMARIZE key points about handling/disposing of sharps with this slide.</p>

Slide Number	Teaching Points
 <i>Customization</i> <i>Notes</i> 19	<p>Customize the slide with the following information:</p> <ul style="list-style-type: none"> ▪ National policy on handling bio-hazard waste, if available ▪ Local procedures for disposing of contaminated waste
19	<p><u>Incineration of Waste</u></p> <p>DEFINE Incineration. Incineration is the burning of contaminated waste to destroy and kill micro-organisms</p> <p>STATE points on the slide</p> <p>Also POINT OUT that contaminated waste should be burned to completion. By completion we mean burned beyond re-use.</p> <p>EXPLAIN local procedures for disposing of contaminated waste if incineration is not available at the test site.</p> <p>EMPHASIZE care should be taken in transporting waste from one site to another for incineration.</p> <p>ASK “Does your procedure include burying waste in a pit?”</p> <p>DISCUSS pits vs. incineration.</p>
Transition	ASK participants if they have any questions before moving on to the next topic.
20	<p><u>Disinfect Work Areas with Bleach</u></p> <p>REMIND participants that daily disinfection of work surface is part of the general safe practice that participants need to follow to keep a clean and orderly work area.</p>
21	<p><u>Different Cleaning Jobs Require Different Bleach Solutions</u></p> <p>EXPLAIN that for spills, you should use a 10% bleach solution. The larger the spill, the longer the contact with the 10% bleach solution.</p> <p>EXPLAIN that for general disinfection purposes use a 1% solution. For example, wiping down all surfaces at the end of the day.</p>

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 <i>Customization</i> <i>Notes</i> 22	<p>If local bleach list the concentration sodium hypochlorite in parts per million (ppm), explain how to make a 10% or 1% solution.</p>
22	<p><u>Making a 10% Bleach Solution</u></p> <p>EXPLAIN the key points on the slide.</p> <p>DEMONSTRATE how to prepare a 10% bleach. Take a 1litre empty bottle that has been marked with 100 mls = 1 part. Explain the bleach should reach this level, then fill up to the next mark with water, this 900mls = 9 parts.</p> <p>EMPHASIZE bleach solutions should be made at the beginning of each week.</p> <p>Work surfaces should be disinfected, at a minimum, at the end of each day.</p>
23	<p><u>In Case of A Spill or Splash</u></p> <p>STATE the points on the slide.</p> <p>EMPHASIZE that one should never leave any spills unattended.</p>
24	<p><u>In Case of an Accident</u></p> <p>STATE the points on the slide.</p> <p>REFER participant to handout "Guidelines for Post Exposure Prophylaxis"</p>
Transition	<p>SUMMARIZE general safety practice (work habits, handling sharps, and disinfecting work areas).</p> <p>ASK if participants have any questions before moving on to the next topic.</p>
25	<p><u>Action Plan for Implementing Safety Practices</u></p> <p>EXPLAIN the points on the slide.</p> <p>REMIND participants that everyone has responsibility for implementing safety practices.</p>

Slide Number	Teaching Points
26	<p><u>Consult In-Country Safety Manuals for Policy and Guidelines</u></p> <p>SHOW and pass around the country's safety manuals. If one is not available, indicate there are several reference manuals that can serve as a resource. SHOW the CDC, WHO, or ISO copies.</p> <p>EXPLAIN what SOP (Standard Operating Procedures) is and why it is important to follow SOP.</p> <p>REFER to the procedures related to safety that are found in a test site. Walk participants through so they get an idea what is covered in it.</p> <ul style="list-style-type: none"> ▪ Housekeeping ▪ Personal protection ▪ Personnel responsibilities ▪ Decontamination & Waste Disposal ▪ Emergency procedures <ul style="list-style-type: none"> ▪ In-lab first aid ▪ Accidental injury ▪ Post exposure prophylaxis ▪ Contacts
27	<p><u>Summary</u></p> <p>ASK participants to answer the questions on the slide.</p> <p>ANSWER any questions participants may have.</p>
<p>Flipchart</p> 	<p><u>Discussion</u></p> <p>REFER to the previously prepared flipchart</p> <p>ASK participants to reflect on these questions:</p> <ul style="list-style-type: none"> • Which of the lab safety practices do you think will NOT be easy for you to do and why not? • What are some possible challenges that will prevent you from adhering to the safety guidelines? • Can you think of ways to overcome that challenge? <p>FACILITATE a group discussion for participants to share their thoughts on these questions.</p>

Slide Number	Teaching Points
 <i>TIPS</i>	<p>The purpose for this discussion is to discover any hidden issues related to adopting the right attitudes toward lab safety. The trainer should also help participants work out plans to work around those challenges.</p>